

### REMARKS

Claims 1-30 are pending in the present application. Reconsideration of the application is respectfully requested in view of the following responsive remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

In the office action of August 28, 2006, all pending claims were rejected under 35 U.S.C. § 103(a) over a number of references. The specific rejections were as follows:

(1) Claims 1, 7-9, 16-17, and 22-25 were rejected as unpatentable over Choy, et al. (EP 1 329 487) in view of Kowalski (U.S. Patent 6,536,893).

(2) Claims 2, 10-13, and 18 were rejected as unpatentable over Choy in view of Kowalski as applied to claims 1 and 17, further in view of Kitamura et al. (U.S. Patent 6,492,222).

(3) Claims 3, 19, and 26 were rejected as unpatentable over Choy in view of Kowalski and Kitamura as applied to claims 2 and 18, and further in view of Iwasaki et al. (U.S. Patent 6,800,588).

(4) Claims 4, 5, 20, and 21 were rejected as unpatentable over Choy in view of Kowalski, as applied to claims 1 and 17 and further in view of the disclosure of Ishikawa et al (U.S. Publication 2002/0175983).

(5) Claims 6, 14, 15, 27, and 28 were rejected as unpatentable over Choy in view of Kowalski and Ishikawa as applied to claims 4, 5, 20, and 21, and further in view of the disclosure of Tamagawa et al. (U.S. Publication 2003/0198885).

(6) Claims 29 and 30 were rejected as being unpatentable over Choy in view of Kowalski and Ishikawa as applied to claims 1 and 17 and further in view of Nakamura et al. (JP 2001001512).

It is respectfully submitted that the presently pending claims be examined and allowed.

The Examiner has primarily rejected claims 1-30 as being obvious in view of two references, Choy et al. (EP 1 329 487) in view of Kowalski (U.S. 6,536,893) and further in view of a number other references as discussed further below. The Applicant respectfully submits that these claims are patentable over the cited references for the reasons set forth below, and that the rejections should be withdrawn.

Before discussing the obviousness rejections herein, it is thought proper to briefly state what is required to sustain such a rejection. The issue under § 103 is whether the PTO has stated a case of *prima facie* obviousness. According to the MPEP § 2142, the Examiner has the burden and must establish a case of *prima facie* obviousness by showing the prior art reference, or references combined, teach or suggest all the claim limitations in the instant application. Further, the Examiner has to establish some motivation or suggestion to combine and/or modify the references, where the motivation must arise from the references themselves, or the knowledge generally available to one of ordinary skill in the art. The Applicant respectfully asserts the Examiner has not satisfied the requirement for establishing a case of *prima facie* obviousness in any of the rejections. The Applicant submits that, in general, the cited references fail to teach or suggest each and every element of the present invention and fail to provide motivation for the various combinations of references cited.

The present invention is drawn to a system for printing durable images. The system includes offset media, a pigment-containing ink-jet ink configured to be ink-jetted onto the offset media, and a calendering device designed to apply pressure to the offset media once the ink has been jetted thereon. Likewise, the present invention includes a method of printing images on offset media, which includes ink-jetting pigment-containing ink onto offset media and applying pressure to the printed image such that a physical property of the printed image is altered by the pressure.

Rejections based on Choy in view of Kowalski

The Examiner has rejected claims 1, 7-9, 16, 17, and 22-25 as unpatentable over Choy in view of Kowalski. The Applicant respectfully submits that the Examiner has not presented a *prima facie* case of obviousness for lack of each and every element and for not providing adequate motivation to combine the references. Choy and Kowalski, both singly and in combination, fail to teach the elements of the

present invention, i.e. the calendering device configured for applying pressure to offset media once ink-jet ink has been ink-jetted thereon, or the applying pressure to a printed image (of ink-jetted pigment-containing ink-jet ink on offset media) such that a physical property of the printed image is altered by the pressure.

Choy is directed to providing ink-jet inks *per se* that perform acceptably on offset media. Choy discloses aqueous ink-jet inks that may comprise dyes or pigments; water-soluble pigments are preferred. See para 0024, lines 25-27. The inks disclosed in Choy are specifically formulated for printing on offset media. See Summary, also para 0017, line 40. Choy notes that the inks presented in the reference can be used on commercial offset papers, which are “significantly different than office plain papers,” and other papers designed for ink-jet printing. See para 0007, lines 44-45.

The Kowalski disclosure, on the other hand, teaches the use of a specific kind of ink that is different from those of the present invention. The ink disclosed in Kowalski is a “water-insoluble dye from the class of dyes known as solvent, or disperse, dyes.” See col 2, lines 37-38. The disclosure goes on to point out the invention is particularly directed to “a sub-class of solvent dyes known as sublimation dyes.” See col 2, lines 41-42. Dyes of this type comprise water-insoluble micro-particulate solids.

As was noted in a previous response, Kowalski is directed to different materials than the present invention. These differences are significant, because the methods disclosed in Kowalski are not appropriate for use with the inks and media to which the present invention is directed. Furthermore, Kowalski does not teach or suggest the calendering process of the present invention.

Similarly, Kowalski does not teach printing on commercial offset paper. The invention disclosed in Kowalski is directed at printing on “common print media,” and “especially plain paper.” See col 1, lines 42-43; col 5, line 64. While the disclosure states that the medium may be coated, it does not teach the use of commercial offset paper. Commercial offset papers, are “significantly different than office plain papers,” and other papers designed for ink-jet printing. See pg 1, lines 27-28; see also Choy et al. para 0007, lines 44-45. As such, even coated plain papers are not equivalent to commercial offset paper. Offset coatings are different from coatings designed for ink-jet printing, with offset coatings being typically more

hydrophobic. See pg 2, lines 2-5. In other words, offset coated media is not a traditional ink-jet media, as it tends to repel aqueous inks due to their hydrophobicity. Likewise, the methods provided by Kowalski, because they are directed to different materials, are very different from the methods of the present invention.

The present invention as recited in claim 1 is a system for printing durable images. The system includes offset media, an ink-jet ink, and a calendering device. The ink-jet ink includes specifically a pigment colorant and is configured to be ink-jetted onto the offset media. The calendering device is configured for applying pressure to the offset media once the ink-jet ink is ink-jetted thereon. Choy does not teach the calendaring device. Kowalski does teach offset media, nor does it teach the ink (e.g. pigment-containing). Where Kowalski is relied on by the Examiner to teach a calendering device, it is inherently impossible for the reference to teach a calendering device configured to apply pressure to offset media. Furthermore, it is also inherently impossible for Kowalski to teach a calendering device configured to apply pressure once the ink-jet ink (pigment-containing), is ink-jetted. Likewise, Choy can not be presumed to teach such calendering device for lack of teaching of any calendering device.

The present claim 17 recites a method of printing images on offset media. The method includes ink-jetting a pigment-containing ink-jet ink onto offset media to form a printed image. The method further includes applying pressure to the printed image such that a physical property of the printed image is altered by the pressure. As with claim 1, Choy does not teach a method or means of applying pressure to a printed image. Kowalski does not teach offset media or the ink as presently claimed, and therefore can not teach the printed image. Furthermore, Choy does not teach application of pressure to a printed image, and Kowalski inherently is devoid of such teaching due to the lack of the printed image as claimed. Additionally, neither reference teaches pressures that would be interpreted to be such that would alter the printed image. Choy clearly does not teach the use of pressure. Kowalski teaches low pressures (only 3-40 psi). One having skill in the art would recognize that the range of pressures taught in Kowalski is at least is significantly different that that claimed in dependent claim 7 of the present application. The Examiner argues that because Kowalski recites pressures, even those outside of those claimed specifically in present claim 7 (500 psi to 3000 psi), "it would be well within the means of one of

ordinary skill in the art to test different pressures and temperatures". See Office Action pg 11, para 10. This is not the case with the application of pressure to a media. The pressures imagined in Kowalski are minor and would be insufficient to alter a printed image as described in the Applicant's specification. Experimenting with higher pressures would be counter-intuitive to one of ordinary skill in the art, particularly when using heat, as Kowalski does, as the combination of excessive heat and pressure typically causes transferring of the image.

The Choy and Kowalski reference provide one skilled in the art no motivation to combine them. The Examiner argues that because both Choy and Kowalski teach printing on a media, "it would have been obvious to combine both references to achieve quality print results". See Office Action pg 12, lines 3-5. As discussed earlier, the motivation to combine references must come from the references themselves, or the knowledge generally available to one of ordinary skill in the art. Neither Choy nor Kowalski offer motivation to combine.

Choy teaches that printing on offset media with excellent quality and bleed control may be accomplished with inks comprising water-soluble colorants and at least one aprotic polar solvent. One having skill in the art would not be motivated modify the printing system of Choy by including a pressure device or step such as those disclosed in Kowalski. Choy teaches that the mechanism for improving printed image quality is in re-formulating the ink, as is shown in Choy, and not in further processing of a printed image.

Furthermore, the methods disclosed in Kowalski are not appropriate for use with the materials of Choy; in fact they would produce undesirable results if combined. Particularly, applying the high temperatures recited Kowalski (a) when used with the ink of Choy, would likely cause the printed image to be transferred to the calendering device; and (b) could cause the coating of the offset media to swell and blister. The Applicant submits that one having skill in the art would find no motivation to combine Choy and Kowalski and would have no reasonable expectation that such a combination would be successful.

Furthermore, there is no motivation to combine the references based on knowledge generally available to one of ordinary skill in the art. Both the present disclosure and Choy recognize that working with offset media presents a working system quite different from typical printing media. See Choy pg 2, para 0006-0007.

Kowalski specifically directs that the processes taught are to be used with printing on “common print media,” and “especially plain paper.” See col 1, lines 42-43; col 5, line 64. One of ordinary skill in the art would not interpret such teaching to be applicable to the very different offset media of the present invention.

As the Examiner has not presented a *prima facie* case of obviousness for lack of motivation to combine and for lack of each and every element in the combination, the Applicant requests that the rejections over claim 1 and 17 be removed. As claims 7-9, 16, and 22-25 depend from claims 1 and 17, they include the claim restrictions of the independent claims. Therefore, Applicant requests that the rejections over claims 1, 7-9, 16-17, and 22-25 be withdrawn for lack of a *prima facie* case of obviousness.

*Rejections based on Choy in view of Kowalski in view of Various Tertiary References*


The Examiner has rejected various other dependent claims as unpatentable over Choy in view of Kowalski as applied to claims 1 and/or 17, further in view of U.S. Patent 6,492,222 to Kitamura et al, U.S. Patent 6,800,588 to Iwasaki et al., U.S. Publication 2002/0175983 to Ishikawa et al., U.S. Publication 2003/0198885 to Tamagawa et al., or JP 2001001512 to Nakamura et al. For the reasons stated above, Choy and Kowalski neither disclose nor suggest each and every element recited in the independent claim for which any of these tertiary references are potentially pertinent. Having stated this, this inquiry is not thought necessary in view of the responsive discussion related to claims 1 and 17, as none of these references cure the inherent missing elements, motivation to combine, etc., of the primary combination of Choy and Kowalski. The Applicant therefore requests that these rejections likewise be withdrawn.

In view of the foregoing, the Applicant believes that claims 1-30 present allowable subject matter and allowance is respectfully requested. If any impediment to the allowance of these claims remains after consideration of the above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone W. Bradley Haymond (Registration No. 35,186) at (541) 715-0159 so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025.

Dated this 28<sup>th</sup> day of November, 2006.

Respectfully submitted,



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